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THOMAS G. NEWMAN, Editor.

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Dare to do Right! Dare to be true!
You have a work that no other can do;
Do it so bravely, so kindly, so well,
Angels will hasten the story to tell.

Dare to do right! Dare to be true!
Other men's failures can never save you;
Stand by your conscience, your honor, your faith,
Stand like a hero and battle to death.

Our Homes are Like Instruments of Music. The strings that give melody or discord, are the members. If each is rightly attuned, they will all vibrate in harmony; but a single discordant string destroys the sweetness.

It is the Duty of every bee-keeper to do all that is possible to strengthen the honey market, and to create an increased and steady demand for pure honey. This should begin at home, like charity, and then extend as far as the influence of each apiarist goes. We commend the following idea from a correspondent. He says:

All around nearly every apiary—may we not say around *every* one—there are numbers of families which never, or seldom use honey. A little well-directed effort, therefore, could increase the consumption right at the bee-keeper's door. Instead of looking to the distant markets of Chicago, New York, or any other place, he could probably find one at home.

This "home market" should be created, and then fully supplied with this delicate food. As a guaranty, or to inform every buyer where more can be obtained, put a neat label on every package. In no place, either in city or country, is the demand for honey what it should be; it therefore behooves every apiarist to create a market and hold it by fully supplying it.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention in Chicago, Ills., on Wednesday, Thursday and Friday, November 16, 17 and 18, 1887. This date will occur during the *second week* of the Fat Stock Show, when excursion rates will be very low.

Nothing but Gas!—A stupid article appeared in the *Cultivator and Country Gentleman* for June 2, 1887, under the heading of "Extracted Honey," and signed, G.A.S.—evidently written by some blatant *gas*-bag!

The "Wiley lie" about "manufactured comb honey," having been demonstrated to be a falsehood from whole-cloth, without either "warp" or "woof" of truth, this *gas*-conader tries to show that the bees are given "sugar and water" to store in place of honey, and that such is sold for "honey in the comb." This is what he says:

Many buyers still think that honey in the comb must be pure, because it has been demonstrated that comb honey cannot be manufactured by artificial means. The general buyer, having no acquaintance with bees, does not know that bees may be made a party to fraud and swindling—that they will store equally sugar and water as carefully as the finest honey gathered from flowers, but they may be made such a party, and they will surround a saccharine compound with comb, even more beautiful, at least whiter, than that built for honey.

Any falsehood will pass current if it will injure apiarists. Does not this gas-blower know that "sugar and water" is *not* honey, and will very soon become *sour*, and that no one could be deceived enough to call it honey?

Mr. E. E. Ewing, of Rising Sun, Md., sends us another copy of that paper with this written upon the margin: "This is the kind of stuff that many of our leading agricultural papers publish!" Yes; that is true—astonishingly true!

What perfect nonsense is contained in the following paragraph from the same article by our *gaseous* friend:

The two-story hive, with a set of frames like the brood-frames in the second story, is considered a good machine for extracted honey, but experience has taught many bee-keepers that the shallow frame, half the length of the brood Simplicity frame, is a better implement.

Brood-frames are "*a good machine* for extracted honey." How astonishing is such an announcement! But what sublime nonsense is contained in the latter part of the quotation: It says "the *shallow* frame, half the *length* of the brood Simplicity frame, is *a better implement!*" Wonderful gas-bag! Marvelous "shallow"-back, "half-length" double-ending implement! Astonishing revelation, with meaningless words and more absurd ideas! So try again, G.A.S. Meanwhile—Ta-ta!

The Home on the Farm is our beau-ideal of living. It is true that our cities are established by "brain and muscle, energy and grit," but this is no less true on the farm, which is or should be "enriched by domestic love, and genuine peace and contentment." We always think of it as a "miniature heaven, where the mother-angel presides, supported by the strong arm and loyal heart of the president, controller, banker and treasurer, all combined in one." What a genuine contrast to the fight-for-life in the busy, fuming and crowded city! And yet the farmer and city-toiler are continually changing places—each one being enamored of the other's pursuit.

One Dollar invested for the weekly visits of the AMERICAN BEE JOURNAL for a year, will richly repay every apiarist in America.

Happy Now may be the bee-keeper who has a good patch of sweet clover either on his land or by the roadsides. This and other fall flowers appear to be the only hope for surplus honey for this season in many parts of the country. Prof. Cook, who has grown sweet clover (*Melilotus alba*) for many years, gives his testimony on its value in the following words:

Sweet clover is beautiful, both in foliage and blossom. It is much superior as an adornment of the roadside to either rag or May weed. It is a most excellent honey-plant, comparable to white and Alsike clover, or to basswood, in value. It is slow to expand, and in meadow and pasture is soon choked out by our cultivated grasses. When once in possession of a spot, it is easy to extirpate it, if it is desired to do so. As is well known, sweet clover is a biennial, and so must come from the seed once every two years. The plants grow from seed one year, and the next year blossom and die.—Thus we have only to cut the plants while in bloom before the seed matures, to extirpate the plants *in toto*. Two such cuttings in adjacent years will do the work most thoroughly. In view of all these facts we can hardly find a more safe and valuable plant for waste places, and for roadside planting. Farmers should encourage its growth both for its beauty and worth.

In view of the fact that almost every other source for honey so far has failed this year, can there be any better advice given to bee-culturists than to *plant liberally* "in, around and about" their apiaries that excellent honey-producer—*sweet clover?*

Happy indeed is the apiarist who has an abundance of it now; while those who have neglected to follow our advice for years on this subject, are now mourning because of their lack of surplus honey!

Do Not Send diseased brood of any kind through the mails. It is a dangerous practice, and very disagreeable to the person who receives such packages. We always burn up such packages as soon as possible after receiving them, being glad to get them out of the way. We hope our friends will not send us any more. It is quite enough to *describe* them. Some time since a man brought a frame of such to a convention, and handed it all around for examination. That was a very dangerous experiment, and should never be repeated.

Honey-Cake.—Here is a recipe for honey-cake furnished by Mrs. J. M. Johnson, of Saratoga, N. Y., which she says is nice while "warm for tea," or "equally good when cold:"

One-half cup of honey; one-half cup of sugar; one-half cup of butter; one egg; two cups of flour; one cup of cold water; two tea-spoonfuls of baking powder. Flavor with lemon or vanilla. This recipe will make one large loaf, or can be baked in gem-pans.

From the Hut to the Pantheon, is a study in the evolution of architecture, treated with Prof. Huxley's well-known charm of style, in the *Youth's Companion* for last week.

Basswood in this latitude has just commenced to yield honey, but it is too early yet to say anything about the crop from it. In places further south, the bloom has "come and gone," and it was of very short duration, and deficient in nectar.

QUERIES

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Experience with the Drone-Trap.

Query 436.—What has been your experience with the Alley drone and queen-trap? Last season I put one at the entrance of a box-hive, and at night I found the bees all outside, and the comb all broken down in the top of the hive. I transferred them to a Simplicity hive, and they have done well, filling up the hive, and also another of the same size on top.—W. C., New York.

We do not use drone traps.—DADANT & SON.

I have had little experience with it, none of which has been like yours, however.—G. M. DOOLITTLE.

All traps of this kind have objections, but very often as a choice of evils they have to be resorted to.—J. P. H. BROWN.

I have never used a drone-trap. The way in which you used it may have interfered with the proper ventilation of the hive.—W. Z. HUTCHINSON.

I have used it with the best of results. It must be used with judgment, and not become filled, for if allowed to do so like results will happen.—H. D. CUTTING.

I have used the Alley drone and queen trap, and a somewhat similar one made by myself of perforated zinc, with entire success. The bees were not disturbed by it, and they seemed to work as well as when it was absent.—A. J. COOK.

I have had them in use only a short time, so that I can say but little from experience. As yet, no such bad results have occurred from the six I have in use.—C. C. MILLER.

I have examined Alley's drone and queen trap, and can give no reasons why it will not do all he claims for it. Still, I have not tested it in a practical way. I have found the perforated zinc so useful in the apiary, and have used it to good advantage in so many ways, that I have no doubt but the Alley arrangement will work well in the hands of a person who knows how to use it. I have no doubt but you smothered your bees in your tight box hive until they were compelled to leave the hive or perish.—G. W. DEMAREE.

I have used Alley's drone and queen trap to some extent since it was first made, and it has worked well with me in every instance. I think well of it, not only to prevent swarming by confining the queen, but also as a means of selection of drones for mating purposes when rearing queens. In the case mentioned above the probability that the use of the trap caused the bees to become excited at a time when too little ventilation was given.—J. E. POND.

My experience with the Alley drone and queen trap has shown it to be a valuable invention. In the case mentioned, the hive had not sufficient ventilation, which the bee-keeper should have perceived, and remedied when the trap was placed over the entrance of the hive.—G. L. TINKER.

The fault must have been in the way you used it. As the bees were "all outside," it shows that the ventilation was interfered with by its use in some way.—THE EDITOR.

Bees Reared in Old Combs.

Query 437.—Can bees develop perfectly and afterwards make as perfect bees reared in "combs 15 or 20 years old," as some claim to have them? This query alludes to Query 409.—California.

Practically, they can.—C. W. DAYTON.

As far as I have been able to discover, they can.—G. M. DOOLITTLE.

I find them to develop perfectly, and but a little smaller than those reared in new comb.—J. P. H. BROWN.

I have no combs so old, but bees hatched in those 12 years old, seem as perfect as those reared in new combs.—W. Z. HUTCHINSON.

I have never noticed any difference between bees reared in such old combs, and those reared in new ones.—C. C. MILLER.

Yes, I have seen bees of the normal size reared in combs that were 30 years old. After bees emerge from the cells it is several days before they attain their full size.—G. L. TINKER.

We think that any cell in which the queen can introduce her abdomen and lay eggs, is large enough to rear worker-bees. When the cells are really too old, she does not lay in them.—DADANT & SON.

They have in our apiary. I have combs now in use that were in use in 1878, surely, and I see no objection to them as brood-combs.—A. J. COOK.

According to my experience and observation, yes. I have seen bees hatched from very small cells that looked to be under the usual size when they first emerge from the cells, but in two or three days they were as large as other bees of the same strain. Still I doubt if it is good policy to use such combs as long as comb foundation can be had at reasonable prices.—G. W. DEMAREE.

I must answer yes, from my own experience. I have some combs in my bee-yard that are 19 years old, and I see no difference in quality or size of the bees reared in them from those reared in comb only a year old. The cocoon-lining left in the cells is so minutely thin as to be hardly perceptible. Perhaps comb 50 years old might bring out smaller bees than is usual; but where shall we find comb of that age?—J. E. POND.

Yes.—THE EDITOR.

Natural Swarming and Unsealed Honey.

Query 438.—1. Will bees swarm naturally without unsealed honey in the brood-chamber? 2. Will they uncap old honey to swarm on?—A. F., Calif.

1. Sometimes. 2. Yes.—C. W. DAYTON.

1. I never knew them to do so. 2. They do not swarm unless honey is being stored; hence there is no necessity for uncapping old stores.—W. Z. HUTCHINSON.

1. I do not think bees will swarm naturally without unsealed honey. 2. They will, provided circumstances compel them to swarm.—H. D. CUTTING.

I have yet to see a brood-chamber with brood and bees in it without unsealed honey, unless the bees are in a starving condition.—G. M. DOOLITTLE.

1. In my experience they have not. Bees only swarm for me after a honey-flow begins, when there will be more or less new honey in the combs.—G. L. TINKER.

A hive that contains sealed honey also has some cells unsealed, and a swarm may issue naturally, without apparently any unsealed honey in the combs. Bees, before leaving as a swarm, always fill themselves with honey, and if they find not sufficient uncapped, they will resort to the sealed.—J. P. H. BROWN.

I think they usually have quite an amount of unsealed honey. They always do when breeding rapidly, and they should be breeding rapidly at the swarming time.—A. J. COOK.

1. A prime swarm is not likely to come off at any time when honey is not yielding, and at such time there will always, I should think, be unsealed honey present. Still, there is no telling what bees may do. 2. I should think they might, but I am only guessing.—C. C. MILLER.

Bees will swarm when the fit seizes them, sure. As to the particular point inquired about, I have had no experince. I think, though, that as a rule, unsealed honey will be found in the hive a swarm issues from, as they usually swarm during a honey-flow. I have caused swarms to issue by pouring warm honey or syrup into the hive on top of the frames with a sprinkler.—J. E. POND.

As a rule they do not, but there are exceptions to this rule, as well as to most other rules, I presume. I have had bees to swarm after the honey season had been over long enough to have no sealed honey in the hive except the daily supply of uncapped honey always on hand; but such swarms is the result of a determined effort to supersede the queen, and such swarms will sting everything in sight, because most of the swarms go out empty. If only a few bees in a swarm go out empty, they will be cross when hiving them. 2. I have never known them to uncap honey to carry it away when swarming in the natural way.—G. W. DEMAREE.

Bees swarm naturally during a honey-flow; and as they fill themselves with honey before swarming, there will always be some unsealed honey left in the hive.—THE EDITOR.

Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ○→ east; ←○ west; and this ♂ northeast; ♂○ northwest; ○♂ southeast; and ♀ southwest of the center of the State mentioned.

Official Report of U. S. Entomologist.

Report of Apicultural Experiments.

N. W. M'LAIN.

[The following is an extract from the Official Report of Mr. McLain to the United States Entomologist, for the year 1886, and now just issued by the Department of Agriculture, at Washington, in its "Reports of observations and experiments in the practical Work of the Division, made under the direction of the Entomologist."—ED.]

BUILDING UP COLONIES IN SPRING.

For preventing spring dwindling, and building up colonies to maximum strength and efficiency at the beginning of the working season—for success in honey-producing largely depends on having strong colonies ready for work at the very time when efficient work may be done—I prepared a bee-food containing the elements essential in brood-rearing. This food is prepared after the following formula:

To 10 pounds of sugar I add half a pint of dairy salt, 2 table-spoonfuls of bicarbonate of soda, 2 table-spoonfuls of rye flour, 2 table-spoonfuls of finely powdered bone-ash, and 1 table-spoonful of cream tartar. Mix thoroughly, then add 2 quarts of hot water, and stir until thoroughly dissolved, and let the mixture boil, but only 2 or 3 minutes. I feed this food in the hive as honey or syrup is usually fed, thereby keeping all the bees at home to aid in keeping up the temperature in the hive, thus reserving their vitality for performing the functions of brood-rearing, instead of speedily wearing out their remaining strength in roaming the fields in search of the elements essential to larval growth.

The bone ash is prepared by burning dry bones to a white ash, which I pulverize and sift through a sieve made from fine wire strainer cloth. As this food is not intended for use until after the bees have had a good flight in the spring, almost any grade of sugar or dark low-grade honey may be supplied for brood-rearing.

The rapidity with which a colony consisting of a mere handful of bees may be built up to full strength and working efficiency by using this preparation is surprising. Only as much as is needed for immediate consumption should be frequently supplied, and it should be fed only to prevent spring dwindling, or when it is desirable to quickly increase the numerical strength of the colony in anticipation of a honey harvest, or to recruit the vigor and strength of the colony by rearing young bees after the working season, and prior to going into winter quarters.

PREPARING BEES FOR WINTER.

Bees instinctively begin to make preparations for winter somewhat earlier in the season than is commonly supposed. In preparing for winter, as in all other matters relating to bee-keeping, the apiarist should see to it that the method of management is as nearly as possible in agreement with the instinct and habits of the bee. When bees build their combs after their own design, as in box-hives, spaces are left between wide enough to admit of elongating the cells in order that a large share of the winter stores may be placed in the top of the hive, easily accessible in the severest weather. I find it a good practice to widen the spaces between the comb frames near the close of the honey-gathering season, in order that the bees may, by elongating the cells, place a large share of the winter stores above the cluster.

As soon as the storing of surplus honey is done the condition of every colony should be examined, the amount and character of the winter food ascertained, the number of comb frames, and the size of the apartment should be determined by and adapted to the wants of each colony. After the supply of winter stores has been equalized among all the colonies, if the supply is insufficient, feeding should be done before the advent of cold nights.

Bees expected to perform the function of hibernation should not be too old nor yet too young. Both queen and worker bees should be in full physical vigor. The bees constituting the colony, when placed in winter quarters, should be such as are hatched after the midsummer working season is past, and before the bees cease flying freely in the fall.

Towards the close of the working season the workers instinctively cease stimulating the queen for oviproduction; gradually the bees cease flying, and the cluster is formed for winter. After the cluster is formed the colony should remain undisturbed. If the bees are to be packed on the summer stand, the work should be done with care, and without disturbing the bees, and before the temperature at night reaches the freezing point. If the bees are to be placed in a clamp, or in a cellar or winter repository, great care should be taken not to disturb the cluster when the hives are removed from the summer stand. I have found woolen quilts or woolen blankets the best covering for winter. Wool, better than any other material which I have tried, prevents the radiation of heat, and permits the escape of moisture, thus securing warmth and dryness. Hives should be placed 18 inches above the bottom of the cellar or winter repository, and in tiering them up one above another it is better that they rest on a rack prepared for the hive rather than one upon another.

My report for 1885 covers the period from June 1 to Nov. 25, when the severity of the weather forbade further out-of-door experiments. As nearly all the colonies in the apiary had been subjected to very frequent, almost daily, disturbance and annoyance incidental to the experimental purposes for which they had been used, they were, almost without exception, in very poor condition for passing into winter quarters. November 25 I packed 20 colonies for out-door wintering. Notwithstanding the lateness of the season, and the altogether unsatisfactory condition of the bees when packed, 18 of the colonies wintered fairly well. These 20 colonies were provided with dry sawdust packing 8 inches thick on the sides, and covered with a quilt and dry forest leaves to the depth of 8 inches on top of the frames. A rim 2 inches wide is placed under the body box of the hive, making a 2 inch space under the bottom-bar of the comb frames. A covered tunnel leads from the hive-entrance through the packing. This packing is left on the hive until warm weather is assured, thus guarding against danger from chilling of the brood when building up the colonies rapidly in early spring. The hive should incline from back to front, permitting the moisture to flow out at the entrance.

I placed 10 colonies in the cellar from which the hive covers were removed and the frames covered with woolen and cotton quilts. These were used for observation and experiment during the winter. Eight or 10 came through the winter alive, but being subjected to a wider range of temperature, and being very frequently annoyed and disturbed, their vitality was very low, and the old bees, of which most of these colonies were composed, fell easy victims to spring dwindling.

HIBERNATION.

For the purpose of determining the degree of temperature in a dry cellar necessary to secure the minimum of functional activity within the hive during the period of hibernation, I framed comb frames across each other at right angles, and into these frames I fitted and fastened combs filled with choice sealed honey. These were suspended in hives having glass sides and top, exposing the cluster to view from all sides and from the top. Removable wooden doors covered the glass.

My observations covered a period of ninety days from Dec. 1, 1885, and include a range of temperature from zero to 65° Fahr. The hives were placed in a dark apartment, and an oil stove with a radiator was used for heating. Different degrees of temperature were maintained for several consecutive hours, and, as occasion

required, for consecutive days, and careful observations were taken.

At a range of temperature from 48° to 52° Fahr., according to the humidity of the atmosphere in the cellar, bees, according to a rule of nature, enter into the hibernating state. After repeated trials over a wide range of temperature, at 41° Fahr., I found the shape of the cluster most permanent. While that degree of temperature was maintained, little change in the shape or location of the clusters could be seen, and functional activity on the part of individual bees, and of the whole colony as well, seemed to have reached the minimum degree of manifestation, even respiration seemed to be suspended. The change in the form of the cluster was determined by outline drawings on paper. The colonies presented substantially the same outline for days together when a uniform temperature of 41° was maintained. I placed some colonies in a darkened building late in the fall of the year, and when the temperature was 40° Fahr. natural heat on a dry day above the ground, the same phenomena were observed.

The temperature of the cellar was lowered by admitting the air through an outer room, so that no perceptible currents entered the apartment where the bees were kept. The degree of unrest and activity increased in proportion as the temperature neared the zero point. Thirty-seven degrees Fahr. in a very dry cellar is a danger point, the danger increasing in proportion as the temperature is lowered or the humidity of the atmosphere is increased.

The degree of activity shown by bees when the temperature in the repository or cellar is 44° Fahr., is not much greater than at 41°, all other conditions being the same.

At intervals of about one week the bees arouse to activity, the form of the cluster changes, and after three or four hours of cheerful and contented humming, having in the meantime appeased their hunger, the cluster is reformed into a compact body, the humming ceases, respiration becomes slow, profound silence reigns in the hive until change of temperature or the demands of hunger rouse the bees from the coma in which they have been bound. The more perfect the conditions for hibernation the longer the periods of inactivity.

As the activity of bees is not much greater when the temperature in the cellar or repository is steadily maintained at 44° than it is at 41°, and as 41° is too near the danger point, I find it safer to keep the temperature in dry winter repositories, whether above or below the ground, at 44° Fahr., and I find it better that the variation from the standard degree of 41° Fahr. should be in proportion of 2° above rather than 1° below. If the repository be damp a degree of temperature higher in proportion to the dampness should be maintained. The hive should incline from back to front, and the entrance should be left wide open.

It has been the practice of many to raise the temperature in winter repositories in order to stimulate breeding toward the close of the hibernating period. I have tried this, and in my experience I find it better to maintain as nearly as possible an even temperature until the bees may be safely placed on the summer stands. What is gained in early breeding is more than lost in the waste of vitality on the part of the older bees. In the case of bees wintered on the summer stands or in a clamp, the packing of dry forest leaves, chaff, or sawdust placed above the quilt should be closely packed about the edges, and should be from 7 to 12 inches in thickness. Indeed, it would be difficult to get the packing above the cluster too deep, provided the ventilation above the packing is sufficient to carry off moisture.

For the American Bee Journal.

Bee-Territory for Bee-Keepers.

OLIVER FOSTER, (296—298).

I have just read Wm. F. Clarke's article on page 377, about "Legislation on Priority of Location," and it seems to me that he presses his point rather strongly with regard to Dr. Miller's position regarding "priority." I have probably not read quite all that has been published on this question in the various bee-papers, but if I have understood Dr. Miller's position from first to last, I heartily agree with him, although it seems to me his position has never been clearly defined. As I am neither a lawyer, nor the son of a lawyer, and know but little about civil government, I have taken no part in this discussion; nor shall I now, as far as it relates to legal practicability; but what I would like to see, I will try to imagine as follows:

Let the authorities of Linn county (in which I reside) assume the control of the territory of the county as far as bee-pasturage is concerned, in something the same way that a patentee assumes the control of his territory as far as his patent is concerned—the authority being derived from government. Let it be advertised several months in advance, that the county will be sold upon a certain date by townships as bee-keepers' territory, for a term of years (say 10 years) to the highest bidders, with certain regulations and restrictions, one of which might be that all present owners of bees may have the privilege of keeping their present number of colonies by paying to the owner of the township in which their bees are kept, a specified tax per colony, which should be something more than the price paid for the township, divided by the whole number of colonies in it.

Other regulations may be added if necessary to secure perfect justice to all. Any new party wishing to keep bees could purchase a limited right to do so from the owner of the township, provided that the owner chose to sell such right.

If some such legislation were practical, though I fear it would not be, the enterprising specialist would "bid off" his own and adjoining townships. He could then safely invest in artificial pasturage, and in permanent buildings and appliances. Should the foul brood scourge invade his territory, he could fight it with some hopes of conquering. He could control the blood of his bees, breeding up improved strains to an unlimited state of perfection.

If we undertake to buy up all the bees in box-hives in our neighborhood, we will probably find parties who can sell us more such bees than we can buy, and at a high price; and we may also find the same spirit an obstacle to the successful treatment of foul brood, or the introduction of improved blood.

If there would be any injustice to any one in some such legislation as the above for bee-keepers, I fail to see it.

Mt. Vernon, Iowa.

For the American Bee Journal.

The Non-Use of Comb Foundation.

JAMES HEDDON.

This question is the one great one which Mr. Hutchinson and Mr. Doolittle have the honor of bringing to the front. In his little book, Mr. Hutchinson has treated the subject in a comprehensive and masterly manner. It seemed to be left to Mr. H. to deal with the principles which make the non-use of full sheets of foundation in the brood-frames a success or failure.

By way of digression, allow me here to say that I consider Mr. Hutchinson's book the work of a master, and an intensely practical treatise—one that hinges on close to dollar-and-cent success in our calling. Further, I wish to publicly recognize his rigid integrity in giving credit where he believed it due. But to return to the question in hand:

I will say that years ago I found that *all* that was claimed for comb foundation as a labor-saving material was not true; that there were some hidden principles somewhere in the problem that offset much of the supposed and claimed value of foundation as material for the bees. I found that in some cases, under certain conditions, the use of full sheets of foundation paid a handsome dividend on the investment; while in others it seemed to be almost of no advantage.

I have used full sheets of foundation in the sections for many years, and also full sheets of foundation in the brood-frames ever since the "wiring system" came about, and I am still adhering to such use, except as I am experimenting in keeping with Mr. Hutchinson's teachings, as laid down in his book and other writings. The results of my experiments I will publish in this paper (with the consent of the editor) in the near future. It is a matter of great economy to know how to get as nice,

straight and all-worker combs, and fully as much or more surplus honey with the use of only guides in the brood-frames.

NARROW GUIDES IN BROOD-FRAMES.

Just here I wish to touch a subject which, so far as I have read, has been neglected by all writers, myself included, although for years I have argued it to my customers who come here in person. It is, that narrow guides for brood-frames are much better than wide ones. After I once abandon the use of foundation for a labor-saving material, by no means will I ever use the foundation guides more than ¾ of an inch wide. If we use them 2 inches wide, although the upper edge fastened to the top-bar must remain as straight as it was put on, the lower edge will warp and curve, so that the comb will not be as straight as though the guide had been but three rows of cells wide, in which case the whole strip, if not of too thin foundation, will remain rigid and straight.

Please experiment with both 2-inch and ¾-inch guides in brood-frames, and see if you do not find this just as I did eleven years ago.

Dowagiac, ♀ Mich.

For the American Bee Journal.

Bee and Honey Shows.

MARK THOMSON.

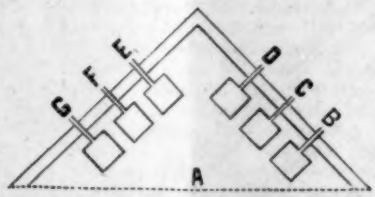
The Stark County, Ohio, Agricultural Society, at the solicitation of the Stark County Bee-Keepers' Society, has appropriated $100, to be given as premiums for bees, honey, supplies, etc., and has also consented to spend $150 for a building specially for the display of these things. A committee was appointed by the Bee-Keepers' Society to select a plan for said building.

Being aware that the Editor of the AMERICAN BEE JOURNAL has had much experience (as well as world-wide observation) concerning the exhibition of bees and honey, we desire that he shall give through the BEE JOURNAL, for the benefit of others as well as ourselves, some suggestions in regard to a plan for such a house or building, with a place partitioned off in which we may exhibit to the public manipulation with bees, with safety to the public.

Canton, ♂ O., June 17, 1887.

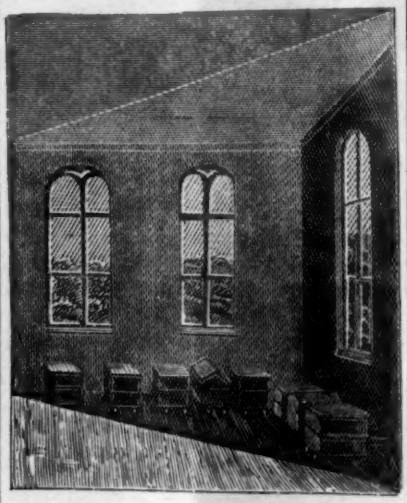
[The Stark County, Ohio, Agricultural Society deserves much credit for the business sagacity which provided for a "Bee and Honey Show." The officers of the St. Joseph, Mo., Exposition did the same as an *experiment* some years ago, and were *surprised* at the result. They realized the fact that it formed the greatest attraction presented at the Exposition.

There they had a building in which to display the honey and implements for bee-keepers, and one corner of it was enclosed by mosquito-bar—the hives of bees being inside, with a tube connecting with the entrances running through the sides of the building, allowing the bees free passage in and out of the hives. Manipulation or examination of the bees,



Corner of Building showing Entrance-Tubes.

may be accomplished by going inside of the netting, and no one outside need be disturbed by the bees. The first illustration shows the ground plan of the same corner: A shows the netting; B, C, D, E, F, G shows the entrance tubes to the hives.



Corner of Building enclosed with Netting.

When in Great Britain, during the summer of 1879, we found that the most attractive features of the fairs

English Bee-Tent.

were the public manipulations with bees, and the large display of honey of captivating beauty. There they had a large tent; the inner circle being enclosed by mosquito-bar or netting around the sides, and about 8 feet high, leaving the top entirely open. Around this circle is a passage-way, covered with canvas above and outside, about 8 feet high, and 6 feet broad; in this inclosure the audience assembles to witness the manipulations with bees.

We gave eight half-hour lectures in this tent; each time the inclosure was full of eager listeners. Two of these were delivered at the Scottish Bee and Honey Show at Perth, concerning which the Dundee *Advertiser* remarks: "The manipulating tent was a scene of great interest during the show. It is of octagon shape, the operator standing in the middle, while the public feel secure under the protection of an intervening gauze screen. Driving bees from a straw skep and transferring their combs to a bar-frame hive, were hourly operations, and never failed to strike with astonishment the spectators, who stood aghast at seeing a human being unprotected turning up a hive of bees, and handling them as if they were blue flies. Mr. Thos. G. Newman, editor of the AMERICAN BEE JOURNAL, was present, and gave lectures on American bee-keeping, which were very interesting. The society presented to him a medal as a souvenir of his visit to this country, and for the valuable services he has rendered to the present session of the society."

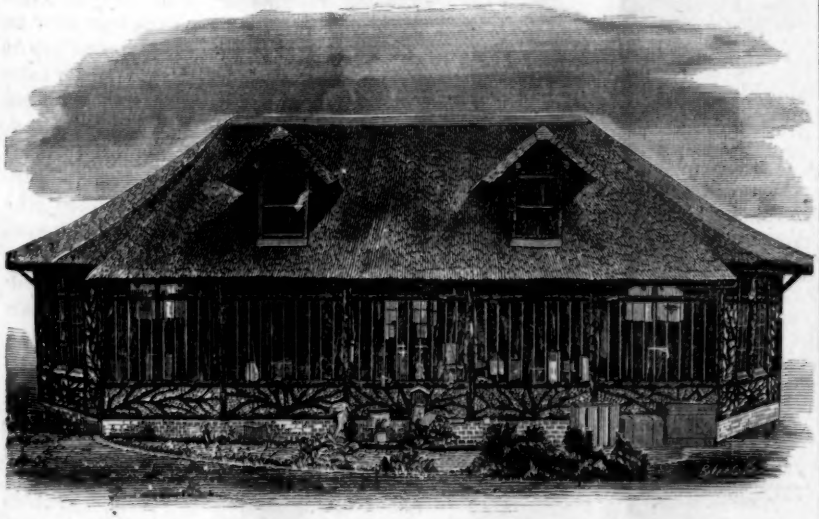
For exhibiting bees, observatory hives were used—those having glass sides, through which the bees may be seen at work—the hives being inside the exhibition building, with a tube covering the entrance, and running through the side of the building, giving free passage, in and out, for the bees. Sometimes, a glass-box inclosing each frame, arranged like leaves of a book, with a common entrance to all of them, from the tube running through the side of the building, is made to exhibit bees. This gives an opportunity for thorough examination of the whole colony.

Concerning the Toronto Bee and Honey Show, Mr. Wm. F. Clarke said: "Under the stimulus of the liberal prize list, there was a magnificent array of honey. The directors appropriated an entire building to the use of bee-keepers, and for the first time at a great exhibition on the American continent, 'honey hall' advertised itself side by side with horticultural hall, dairy hall, etc. Honey was displayed in every form, calculated to make the mouths of

spectators water. The tin packages and cans were gorgeously colored and labeled; the glass jars were in various beautiful shapes, and even the wooden boxes displayed a wonderful diversity of taste. In the centre was a miniature church, ingeniously built of honey comb and wax, with pinnacles and spire. A smashing trade in honey was done at the exhibition. Thousands of people might be seen with gay-looking tin cans dangling from their fingers, or with pretty glass jars in their hands, or nice boxes under their arms. They bought and carried them home very much as is usually done with toys and trinkets on such occasions. The success of this show awakens great expectations as to the future of bee-keeping in this country."

Of the Honey Show in San Francisco, Calif., the *Semi-Tropic* said: "The attractive display of bees and honey formed a centre around which apiarists literally swarmed. One hundred and two varieties of honey-producing flowers formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which cannot be photographed except by the artist memory. There were samples of excellent honey vinegar, almost colorless, and above the average in acidity; several samples of fruit preserved in honey with undeniable success, and three kinds of honey cake, which elicited the warmest praise from those who were fortunate enough to secure a sample. Fruit cake made with honey is richer, and retains moisture much longer than that made of sugar."

Canadian Honey Exhibit in London, England.



Bee and Honey Pavilion at the Paris Exposition.

The first engraving on this page shows the interior of the building in London, at the Colonial Exhibition, containing the Canadian exhibit of honey in 1886.

The second illustration shows the "Bee and Honey Pavilion" at the Paris Exposition, in which an immense "show" was made.

Read at the Maine Convention.

Points of Excellence in Bees.

WM. HOYT.

That the bees of the present time are capable of improvement, no one will deny. But just how to go to work to improve them, is a very important question, worthy of the consideration of this convention.

Having for several years given considerable thought to the matter of improving our bees, I will briefly outline a method that, if carried out by a majority of the bee-keepers, would undoubtedly in a few years give good results!

In order to go to work understandingly, the bee-keeper must have in view certain points of excellence which must be first obtained, and then retained and improved upon. In order for a bee-keeper to know what good points are already possessed by his bees, a record must be kept with each colony, and good judgment used in deciding upon their wintering qualities, disposition, etc.

The first and principal object in the keeping of bees is the production of honey, but there are several minor points that must be taken into consideration therewith. I will here introduce a scale of points, imperfect I am well aware, but it will serve to illustrate my meaning:

To every colony of bees that gather sufficient stores for winter, I would allow one point; then for every 15 pounds of extracted honey, one more point. The next desirable quality to be taken into consideration is hardiness, and ability to stand our unfavorable winter and spring weather. Colonies that winter perfectly, and come through the spring without dwindling, should be allowed three points.

Next should come character and disposition. If a colony can be hand-

led during the flow of honey without stinging, spread out evenly upon the combs and remain quiet while being examined; good to repel robbers and moths, and not meddlesome (that is, not attempting to rob weak colonies or putting out their keeper's eyes when unmolested), I would allow three points. Thus a colony having perfect disposition, wintering perfectly and getting 45 pounds of surplus honey, or 90 pounds of extracted honey, and having sufficient stores to winter, would score ten points.

I think that excessive natural swarming should be discouraged, consequently I would not allow any credit for swarms cast, but would commence a new account with the new colony. The bee-keeper, having kept a record with each colony for one year, is then ready to select say about 4 colonies that have the previous season scored the highest number of points from every 10 colonies, from which to rear queens and drones, two of the selected colonies to be used for the rearing of drones, and the remaining two being used for rearing queens. No drones should be allowed to issue from the other colonies selected for that purpose.

There are several methods in use by bee-keepers for rearing and fertilizing queens from those selected colonies, that will readily suggest themselves to the advanced bee-keeper; but I wish to briefly outline a method that may be of some benefit to the beginner:

The colonies for breeding purposes should be selected as early as April 12, or at least May 1, in this locality. The colonies selected for drones should be given one or more sheets of drone-comb placed near the centre of the cluster, and the bees and queens stimulated by feeding, if necessary, to get eggs placed in the drone comb as early as possible, as the drone will require about 35 days from the egg, to be of service.

I believe that queen-cells started under the natural-swarming impulse are certainly as good, if not better, than those started by any other method; consequently colonies selected for rearing queens should be brought up to the swarming point early in May, if possible, by stimulative feeding, and if necessary by the addition of brood from other colonies. Watch them closely, and about six or seven days after the eggs have been deposited in the queen-cells, remove the old queen and a few bees to a new hive, and build them up again to a full colony. In about six days after the removal of the queen, divide the old colony up into as many nuclei as you have frames with queen-cells attached. In about 26 days, or early in June, the queens will be laying and ready for use.

The above method gives the bee-keeper queens reared under the natural-swarming impulse, and all drones and queens are reared from colonies selected after a competitive trial, and must, if persisted in, greatly improve bees of whatever race or color.

For the American Bee Journal.

Foundation Starters in Brood-Frames.

FRANKLIN P. STILES.

As I have not read Mr. Hutchinson's book I cannot say to what extent he advocates the use of starters in brood-frames; but current bee-literature would indicate his total repudiation of foundation on which to hive swarms. I hardly feel like accepting the idea that one who has so readily seen through the "outs" and "ins" of the different systems of management, with the bearing they have on the producing cost, and has so graphically depicted the experience of many others, using words that exactly conveyed what they lacked the ability to express, can be unreservedly committed to this system.

That swarms can be so treated, and a larger return be realized the same season, my tests for several years with from one to twenty swarms so hived each season clearly show; but please bear in mind that it was wholly a dollar-and-cent advantage *for the season*, a system only suited to the business of honey-producing exclusively, wherein the capital and stock in trade is a fixed amount not to be extended. The advantages that have been, and can be, secured by this plan, where no permanent increase is desired, are very great; but thinking to realize these advantages, and at the same time increase the practical working value in an extension of your plant, is simply an illusion. "You cannot eat your cake and have it too."

The permanent part of an apiary can never work too perfectly if we would produce with the least labor and expense, and no combs can be obtained from starters only, that can compare with those built from foundation in wired frames. The latter are a joy and a comfort for years, facilitating the rapid manipulation of a colony, whether we handle the frames singly or the entire section, as we usually do with the Heddon hive.

Perhaps one not familiar with the Heddon hive will ask, what difference does it make if we handle the whole case of frames at once? I find this difference: Nearly all of the bees are easily shaken from a case where the combs are of equal thickness, and true, as when foundation is used, giving a clear view of all the ranges of comb; while naturally built combs (with me) are never "as true as boards," but more or less wavy and uneven with some drone-cells, though the latter, except for its rendering the combs still more uneven, is the least I have to contend against. This uneven surface enables the bees to retain their foothold, requiring more time and strength to dislodge them. If, then, we wish to examine the combs our view is greatly obstructed.

Thus two of the best features or characteristics of Mr. Heddon's invention are rendered nearly inoperative. This latter objection, of course, would not apply to a hanging-frame hive, but my experience with the Langstroth frame used with starters, has shown me that it requires far too much time to be thought of except in a limited way as an experiment.

I understand that Mr. Hutchinson cautions the convert to the doctrine of starters, to go slow by testing one or two colonies. So, if you take his advice just as he gives it, you will not "advance to the rear" to an extent to be repented of; but the universal hiving of swarms which are to become permanent colonies, on other than full sheets of foundation, I am convinced is a backward step, the recovery of which will be found expensive, slow and annoying.

Mr. Hutchinson may be well satisfied with his colonies whose homes have been furnished originally with starters, but I think that if he were purchasing those same colonies, the argument in favor of combs built from foundation would present itself, to the advantage of the seller.

Haverhill, Mass.

Farmers' Review.

Uniting Weak Colonies.

W. Z. HUTCHINSON.

The reason why bees sometimes quarrel when united, and then under apparently similar circumstances peaceably unite, is not well understood. I have frequently united several colonies during the same day, and the bees in some of the hives would quarrel, while in others "all was serene." When honey is coming in plentifully, there is usually but little quarreling. Queenless bees are much more peaceably inclined, and will readily accept a new locality, if by so doing they secure a queen. A thorough smoking repeated perhaps two or three times will sometimes take the "fight" out of the bees that have been united.

As a general thing bee-keepers do not approve of uniting weak colonies in the early spring. The disturbance and increase in numbers seems to have a stimulating effect, and brood-rearing is increased to an undue extent. The bees are all old, and soon die off under the labor of brood-rearing. A spell of cold weather chills the brood, and the colony soon dwindles away and dies. Three weeks after half a dozen weak colonies have been united often finds the new colony no stronger than each would have been had there been no disturbance or uniting. Probably the best that can be done with weak colonies in the spring, is to pack each by itself, confining the bees upon as few combs as possible. Those that live, will of course increase in numbers as the warm weather comes on, and as they become crowded for room more combs may be added from time to time. Upon the eve of the honey harvest, the weak colonies may often be united with advantage, especially so, if comb honey is produced.

In uniting, the queen and one comb of brood and honey should be left in the hive upon the old stand, with the

addition of perhaps two or three empty combs. This little colony will build combs and increase in numbers, and, by fall, will be a first-class colony, while the united colonies will be first-class for storing comb honey. In uniting the colonies, the combs should be placed alternately, *i. e.*, one from one colony, then one from another and so on, as this so mixes up the bees that but little quarreling results. If honey is coming in there will be but little trouble on this score. It is when no honey is coming in that bees give trouble when uniting.

It may be asked why not unite the weak colonies when working for extracted honey? Such colonies, if furnished with combs, seem to do just about as well, according to their numbers, when run for extracted as do strong colonies, but for working in sections weak colonies are of little value.

Rogersville, Mich.

Read at the R. I. Convention.

Bees and the Production of Honey.

W. O. SWEET.

A colony of bees in complete working order consists of 15,000 to 40,000 bees. In all this multitude of industrious insects there is but one queen or mother-bee, which is the only perfectly developed female in the colony, and the thousands of workers are imperfectly developed females or heater bees. With February the queen-bee commences to lay a few eggs near the centre of the cluster of bees, first laying within a small circle in one comb, soon extending to two or three combs, and in 21 days from the laying of the egg the young worker-bee appears.

In March the circle of brood increases quite fast, and by April the maple and elm begin to bloom, then comes the first flow of honey. Within and without the hive the merry hum of the bee is heard, while load after load of the delicious nectar comes pouring in from the first flowers of spring. As the queen still enlarges the cluster of eggs extending from comb to comb, she comes to one that has much larger cells which we call drone comb, and is for the purpose of rearing several hundred drones or male bees. These neither work nor sting, but being possessed of a capacious stomach, are much disposed to eat and grow fat on honey, but their life is short, seldom over four months. The worker-bee lives but three or four months during the time of flowers, while those reared late in the season live until spring, but none except the queen live to be a year old. The queen lives to be 4 or 5 years old, so we might compare the life of the bee like that of a populous city.

"Though like leaves on trees the race of bees is found,
Now green in youth, now withering on the ground,
Another race the spring or fall supplies;
They drop successive and successive rise."

During the month of May, the season of fruit-bloom, the queen is the most active worker in the hive; hundreds and thousands of bees are hatching every day, while she is constantly traversing the combs and depositing an egg wherever a bee has hatched and left its cell.

This is the time for the bee-keepers to be busy also, for the wealth of the community begins to unsettle the kingdom, new hives must be ready for the swarms that are likely to issue, and more room given to the colony by placing on the boxes for surplus honey. By the month of June the colony is running to its utmost capacity, and if given plenty of room to store the honey, and a good field where white clover is plenty within two or three miles, they will often show wonderful results. Natural swarming takes place this month, whereby the instinct of the bees leads them to divide off and form a new colony. By conforming to the habits of the bees, this can be accomplished by dividing, which, if properly done, will be as successful as the natural process without waiting for that to begin, for where many colonies are located in one apiary, the intelligent bee-keeper can provide a large number in one day, thus saving much time and perhaps loss.

The month of July finds the hive teeming with bees, and almost filled to overflowing, while the queen is still laying eggs vigorously, for the mortality is great in the height of the season, and they literally work themselves to death. The young bee, on emerging from its cell, is rather a weakly thing, but it turns its time to good account, helping to feed the still younger bees in the larval state. After becoming a week or more old it takes the position of comb-building. It attends to this kind of work until old enough to fly, which is in about four weeks. When six to seven weeks old it becomes a honey-gatherer for the rest of its life.

During August the condition of the colony remains about the same, and September finds it active as ever, but the queen is now gradually diminishing the number of eggs, and with the bloom of goldenrod and wild asters, the honey season is about over. Atmospheric conditions have much effect on the honey harvest throughout the season; for instance, when the wind is east, little or no honey is secreted in the flowers, while if the wind is in the south, with moist air, the flowers are again yielding honey. When we have occasional thunder showers then is the greatest secretion of honey. As the honey harvest from any particular bloom is always of short duration, the intelligent bee-keeper will study to make the most of it, so by using the honey extracted at these times, with plenty of empty combs on hand to fill, so as to save the bees time in building it, a large quantity of liquid honey is often obtained.

Comb foundation is now used by all progressive bee-keepers, for like the honey extracted, it enables the bees to gain time in the storing of honey. It is claimed that a new colony of bees supplied with foundation when placed in a new hive at times of swarming, will gain as much in two days as they would in eight days without it.

Many suppose that honey-comb is being manufactured entirely and filled and finished by the hand of man. The most scientific experts in bee-culture agree in saying that it is not and cannot be done.

In October and November the colony prepares for its long winter rest. The queen stops laying eggs, and the bees do little else but fly out on warm days for exercise. The first product of the bees of importance is honey; the next is wax. This solid, fat-like substance is secreted by the bees in little wax-pockets beneath the wings on the under side of the body of the bee. It is always a subject of admiration, so fragile and yet so strong. There are four of these wax-pockets on each side of the bee, and the first we can see of the wax it is in the form of little tumbler-shaped scales, white and very thin. A swarm of bees has to consume about 20 pounds of honey to produce one pound of wax, and soon after hiving, a large part of the swarm hang in festoons and clusters several hours, waiting for the wax to form. When fully formed these wax scales are transferred to the mouth of the bee where, by the use of its jaws, it is moulded into that beautiful structure, the honey-comb, so wonderfully delicate that it is only about 1,000th of an inch in thickness, and so formed to combine the greatest strength with the least expense of material and room.

West Mansfield, Mass.

For the American Bee Journal.

Bee-Keeping in Southern Indiana.

J. H. LOUDEN.

Unless there is some change in the weather soon, in this part of the country, the question that will trouble the bee-keeper this fall will not be how to dispose of his honey, but how to winter bees without honey!

The bees, so far, have gathered scarcely enough to keep them. The weather has been very unfavorable. During fruit-bloom it was cold and wet; then we had a spell of warm weather, and a little honey was gathered from the locust. White clover commenced blooming the last week of May, and the ground now, in places, is white with it, but we are getting no honey. After the clover cammenced blooming, we had heavy rains every day or night, up to June 8th or 9th, then it cleared off cold, and an east wind has been blowing ever since. The prospect is not very encouraging.

I have as many colonies as I want, and in the spring I purchased a copy of Simmins' book on preventing swarms. I have been following his instructions with fine results so far. The system works admirably while no honey is coming in. If we are fortunate enough to have a flow of honey, I will report on "Simmins' Non-Swarming System." The basswood will bloom in about ten days,

and if the weather is favorable we may have a flow of honey from it.

Last season I sowed a small field in Alsike clover, on my farm about 2½ miles from the city. It is now in bloom, and makes the most beautiful carpet with which the earth ever was covered.

Bloomington, ♀ Ind., June 14, 1887.

Semi-Tropic California.

Dividing for Increase.

S. D. BARBER.

To do this successfully, queens should be reared and ready to furnish each new swarm with a fertile queen at the time of forming such colonies; the time saved in breeding is very important.

TO REAR THE QUEENS.

Form a nucleus from the strongest colonies, select a comb containing capped brood and plenty of eggs and young larvæ; look it over carefully lest the old queen is on it; cut one-third or one-half the lower part out of this comb, which gives the bees room to build cells on the lower edge—a convenient place for the operator to remove them, when forming other nuclei. Place this, with its adhering bees, in an empty hive, and next to it another comb containing honey and bee-bread; this affords food and protection. Give the nucleus colony at least a quart of bees, and put it on a new stand, and confine the bees there until the next morning. Then contract the entrance so that but one or two bees can pass out at the same time. They will usually build six or ten or more queen-cells on the eighth or ninth day after the nucleus was formed. Then open the hive, and with a very thin-bladed knife cut out all the queen-cells but one, and use them immediately in forming other nuclei, by attaching each to a frame of comb and bees taken from an old colony as before described, and placed in an empty hive.

In transferring queen-cells care must be taken not to expose them to cold or heat, or to denting the cell. Leave about an inch square of comb at the base of the cell, and insert it among the young brood. Never leave a nucleus colony destitute of young brood after the young queen hatches, as the bees are very apt to abandon the hive when the young queen goes out to meet the drone. Now watch and care for the young queens until they become fertile.

WHEN AND HOW TO INCREASE.

When your colonies are strong and you are ready to form new ones, first, cage the young queen, then from a number of colonies take sufficient frames and bees to form a good colony of bees; close up the hive of the new colony until the next morning, then open it, and on the second or third evening liberate the queen. Continue in this manner until you have such increase as you desire, but in all the operations use plenty of smoke.

Again, the forwardness of the season must be your guide as to the time to form colonies. You can rear queens early and keep them in readiness; a colony of bees without a fertile queen, build mostly drone comb. The bee-keeper that rears queens for new colonies must have the hives for the season ready early. Success is not in the number of colonies on hand; it is not bees we want, it is honey. It is not a great number of workers in one field that will secure this, but a large force in each hive.

The apiary should have the cheerful ray of the morning sun. A very good way to check robbing is to place a bunch of grass or wet hay over the entrance to the hive. The bees will find the way to their own hives, but robbers will be caught by the sentinels while passing through the grass. The moth is a scavenger which comes to clean up the wreck of the negligent bee-keeper.

Downey, ♀ Calif.

Prairie Farmer.

Getting Bees out of Honey-Sections.

MRS. L. HARRISON.

As I was one day out driving, a man shouted as he drove by, "How do you get bees out of the honey-boxes?" I felt like replying, "Get a stick and drive them out," for the reason that this man is too penurious to invest a cent in a paper or book, in which he could learn how to manage bees, expecting to get his information without expense or labor on his own part. Different kinds of surplus boxes of course call for different management. Where one pound sections are used in Heddon cases and tiered up, the nearest finished on top, when these are completed, the bees can be driven below with smoke or the breath. The box is then carried into the honey house or close room, as the case may be, and set upon the edge; the bees, if there are any, will cluster upon the windows, and may be put out. I once saw a farmer who kept only a few colonies for his own use, take off old-fashioned close boxes and put them into the bottom of an empty barrel, and cover it up tightly excepting a small hole for the bees to go out of. He was not troubled with robbers in this way, and the bees flew home to their hives.

SWEET CLOVER FOR HONEY.

Indians call white clover the "White man's foot," and sweet clover (*Melilotus alba*) might appropriately be named the "bee-keeper's tracks," for it is generally found growing in their vicinity. When traveling, and this plant is visible, it always seems to indicate the proximity of the fraternity, and I feel that friends are near. It appears as if bee-keepers carried the seed of this plant in a pocket which had small holes in it, letting it trickle out. Some farmers class it as a noxious weed. This, however, is a mistake, as it dies root and branch the second year, and appears to thrive best in poor, gravelly soils, and protects uneven ground from washing out in gullies. It starts very early in the spring, before other clovers, and at this time is eagerly eaten by fowls. Melilot appears to yield honey at a time of day when others fail. From observations, I conclude that the flow of nectar at any one time is not large from sweet clover, but is very valuable on account of its continued bloom during drouths, and during the interim between spring and fall bloom.

Local Convention Directory.

1887.	*Time and place of Meeting.*
Nov. 16-18.—	North American, at Chicago, Ills. W. Z. Hutchinson, Sec., Rogersville, Mich.
Dec. 7-9.—	Michigan State, at East Saginaw, Mich. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Kissing Bees.—Oliver Foster, Mt. Vernon, ♁ Iowa, on June 18, 1887, writes:

DEAR EDITOR:—Will you please pardon the following (see page 371), and print it as a bit of "scientific pleasantry," written at my out-apiary on a hive-cover, with honeyed hands and a swollen eye:

"If a body kiss a body,
Need a body cry?"
Or should a bee kiss you or me,
Or, with her wish comply,
And kiss the lady's hand, I'm sure
The lady would not lie,
Should "doubting Thomas"—though
from us high—
Think 'twas "in her eye?"

Now bit or miss, I'll tell you this,
My bees are not so shy;
They from my fingers sweetness kiss,
And beauty from my eye.
And is it queer, with charms and cheer,
The winning mistress found
Her honey would bring "fifty cents,"
Or *sixty* cents per pound?

Taking New Honey.—Nate C. Pedley, Dubuque, ♁ Iowa, on June 21, 1887, says:

My bees wintered pretty well, as I lost only one colony out of 17. I have had 2 rousing swarms so far. I will take off three cases of clover honey on Friday.

Fair Crop Expected.—Jos. E. Shaver, North River, ♂ Va., on June 21, 1887, says:

For the last 10 days bees have been doing extra well on white clover; before that time they were in a starving condition. But now the fields are white with clover, and the weather is very fine, and we have hopes for a pretty fair crop of honey yet.

Strong Colonies, but no Nectar.—J. W. Bittenbender, Knoxville, ♀ Iowa, on June 18, 1887, writes:

Bees in this locality are doing but very little in the way of gathering surplus honey; if we get a quarter of a crop we will do well. Bees wintered well, and colonies are very strong, but it is very dry and warm, and white clover does not secrete any nectar. Linden is just opening, but I cannot tell, at this writing, what the harvest will be.

No White Clover Honey.—L. Highbarger, Adeline, ♂ Ills., on June 17, 1887, writes:

The white clover honey crop I predict will be an entire failure in northern Illinois, on account of the drouth. My bees have less honey to-day than they had last April, when put out of the cellar. The true time when to put on sections has not appeared yet, and I think it will not (that is, new comb). I have a field of Alsike clover, but there appears to be no nectar in it—something that I have never known before. Pastures have given out, so we have to turn our stock on the grass intended for hay.

No Swarming, etc.—Harry Griffin, Kilgore, ♂ Ky., on June 17, 1887, says:

White clover is in full bloom, and the bees have hardly started to gather any surplus honey. I hear of no swarming in this part of the country.

Unfavorable Prospects.—D. F. Park, Athens, ♂ Pa., on June 20, 1887, says:

The prospect of a crop of white clover honey is not good. Clover has been in bloom for ten days, but owing to cold nights it has yielded but little honey. In over 70 hives but 4 show honey in the sections; one of these is a new colony hived one week ago, *a la* Hutchinson, which is nearly filled with white honey. Thanks, Mr. H. Swarming is light as yet; my bees have cast but 7 swarms, while my neighbor's bees have not done so much. The last three nights have been warm, and honey is now coming in better.

No Honey—Shade for Hives.—O. R. Goodno, Carson City, ⊙ Mich., on June 20, 1887, writes:

I began the season with 100 colonies of bees, besides 3 or 4 small, weak ones. On June 1, there was not one pound more honey in the hives than there was when they were put out in the yard, but they were full of brood. Prior to June 1 we had had a dearth of honey, so all the bees in the country were set to robbing; since white clover opened they have gathered some honey, and a few have swarmed, but there have been no second swarms. I have cases on about 100 colonies now; a few are nearly capped, others not commenced. There is no boom in either honey or swarms. I am going to try ten reversible hives. I saw an article in a recent number of the BEE JOURNAL with reference to shading hives. I find that sun-flowers are very satisfactory for shade, in my yard. I keep it hoed, not allowing a weed to grow, but plant about two seeds just at the front corner of the stand; they come on about July, August, and Sept. 1, at a time shade is needed, while they are out of the way during both spring and fall. The stalk below does not hinder the bees' flight, and the shade above is just where you want it. It affords some pasture, and chicken feed when gathered. Basswood is budded very full, and bids fair to open early.

Favorable Prospects for Linden.—Clemons, Cloon & Co., Kansas City, ♀ Mo., on June 16, 1887, write:

We have had splendid rains the last few weeks, and the prospect for a good crop of linden honey is favorable; while the white clover will be very light.

Bees doing Nothing.—Henry Alley, Wenham, ♂ Mass., on June 16, says:

It is cold here. Bees are doing nothing, and have not done anything so far this year. The season will close here in 20 days.

Bees Doing Poorly.—Jos. M. Hambaugh, Spring, ♀ Ills., on June 16, 1887, writes:

Bees are doing very poorly in this locality. There is no swarming, and but little tendency in that direction. The wholesale slaughtering of drones has been the order of the day up to about three days since, and there are less in the air than I ever saw at this time of the year. I had extracted twice up to this date last year. Clover has been abundant, but comparatively no nectar in it. I hope to be able to present a better report next time.

Excellent Honey-Flow.—Dr. S. W. Morrison, of Oxford, ♀ Pa., on June 22, 1887, writes as follows:

The past five days has exceeded any previous five days that I have ever seen in the honey influx! "Hurrah" for Carniolans! I have 50 colonies of them, and I am delighted with them.

Surplus Crop Nearly a Failure.—E. T. Jordan, Harmony, ♀ Ind., on June 22, 1887, writes:

Bees wintered well in this locality. I lost 2 colonies out of 63, and then disposed of 12 colonies. Bees have done nothing as far as producing honey, and the crop will be very light. They obtained no surplus from fruit-bloom, and white clover is almost a failure. We have very little basswood, so our surplus honey will be nearly a failure. By this time last year I had taken over 2,000 pounds of honey from 42 colonies; this year I have not taken any, and have had only 11 swarms.

No Nectar in White Clover.—F. H. Kennedy, Du Quoin, ♀ Ills., on June 17, 1887, says:

The bees here are doing next to nothing. There seems to be no nectar in the white clover, so the bees have eaten what honey they had this spring, and are gathering only enough to live on, and are not rearing brood. Some bees are working on red clover now, but it is about all cut. White clover is still blooming.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Prices are about 10@12c. for comb. Extracted, 5@7c., according to quality and packages. Stocks and demand light.
BEESWAX.—22c. R. A. BURNETT.
June 9. 161 South Water St.

DETROIT.

HONEY.—Best white comb, 11@12c. Market is nearly bare, awaiting the new crop.
BEESWAX.—23@24c.
June 10. M. H. HUNT, Bell Branch, Mich.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 5@5½c; light amber, 4½@5c.; amber, 4¼@4½c. Comb, white, 12@14c.; amber, 7@10c. Demand very good.
BEESWAX.—22@24c.
Jun. 13. SCHACHT & LEMCKE, 122-124 Davis St.

CLEVELAND.

HONEY.—Choice white in 1-lb. sections, 12@13c.; second quality, 10@11c.; and buckwheat unsalable at 8@9c. Extracted, 5@6c.
BEESWAX.—25c.
Apr. 20. A. C. KENDEL, 115 Ontario St.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3½@4½c. Extra fancy, ¼ more than foregoing prices. Extracted, 4½@6c. Market dull.
BEESWAX.—Steady at 20½c. for prime.
May 20. D. G. TUTT & CO., Commercial St.

SAN FRANCISCO.

HONEY.—We quote: White comb, 12@14c.; amber, 7@c10. Extracted, white, 4½@5c.; light amber, 3½@4½c. Market quiet.
BEESWAX.—19@21c.
May 14. O. B. SMITH & CO., 423 Front St.

MILWAUKEE.

HONEY.—Choice white 1-lbs., 12@12½c.; choice 2-lbs., 10@11c.; dark not wanted, and imperfect slow. Extracted, finest white in kegs, 6½@7c.; in white in kegs and barrels, 6@6½c.; dark, 4 to 4½c.; amber, in barrels, 4½@5c. Demand limited and supply small.
BEESWAX.—25c.
June 10. A. V. BISHOP, 142 W. Water St.

NEW YORK.

HONEY.—We quote: White comb, 9@12c.; dark 5@7c. California comb, 8@9c.; extracted, 5@6c. Sales large and demand good.
BEESWAX.—23@24½c.
McCAUL & HILDRETH BROS.,
May 10. 28 & 30 W. Broadway, near Duane St.

KANSAS CITY.

HONEY.—We quote: White clover 1-lbs., 10@12 cts.; dark, 9 to 10c. White clover 2-lbs., 10 to 11c.; dark, 9 to 10c. Extracted, 5 to 6c. in small way. Market almost bare of comb and extracted honey.
Jun. 16. CLEMONS, CLOON & CO., cor 4th & Walnut

BOSTON.

HONEY.—1-lb. packages of white clover honey at 13@15c.; 2-pounds at 11@13c. Extracted, 5@7c. Sales slow.
BEESWAX.—26 cts. per lb.
Apr. 22. BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI.

HONEY.—We quote for extracted, 3@7c. per lb. Best comb brings 11@14c. Demand improving.
BEESWAX.—Good demand.—20@22c. per lb. for good to choice yellow.
Jun. 11. C. F. MUTH & SON, Freeman & Central Av.

AMERICAN
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BEE JOURNAL

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Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with $2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Do you Want a Farm Account Book? We have a few left, and make you a *very tempting offer*. It contains 166 pages, is printed on writing paper, ruled and bound, and the price is $3. We will club it and the Weekly BEE JOURNAL for a year and give you both for $2. If you want it sent by mail, add 20 cents for postage.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

By Using the Binder made expressly for this BEE JOURNAL, all can have them bound and ready for examination every day in the year. We have reduced the price to 60 cents, postpaid. Subscription for one year and the binder for $1.50.

We Supply Chapman Honey-Plant seed at the following prices: One-half ounce, 50 cents; 1 ounce, $1; 2 ounces, $1.50; 4 ounces, $2; ¼ pound, $3; 1 pound, $5. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

Enameled Cloth for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, $2.25; 10 pieces, $20.00; if ordered by mail, send 15 cents per yard extra for postage.

Where to Keep Honey is the title of Leaflet No. 3. For prices see the second page of this paper. If you wish to see a sample of it before purchasing, send for it.

We pay 20 cents per pound, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

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